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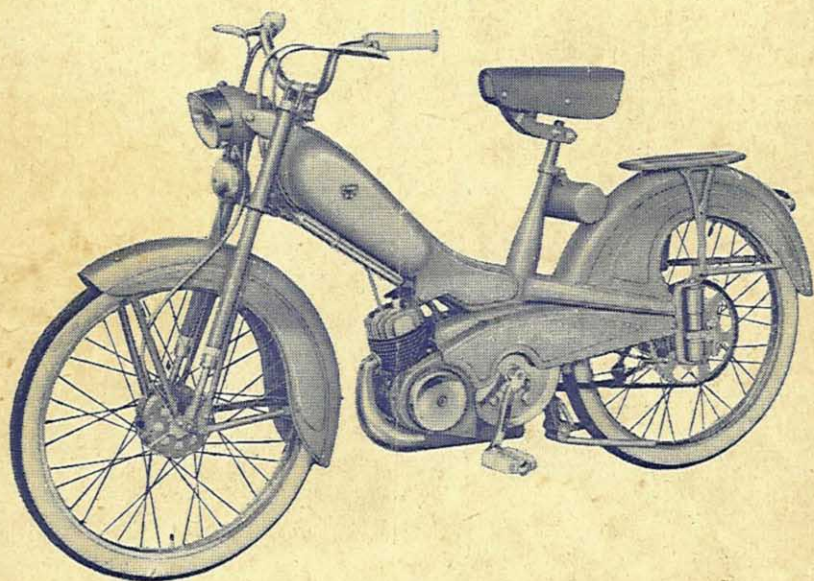


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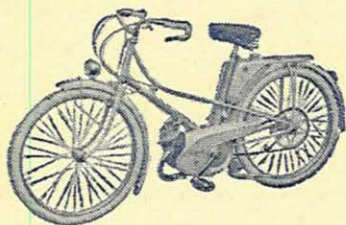
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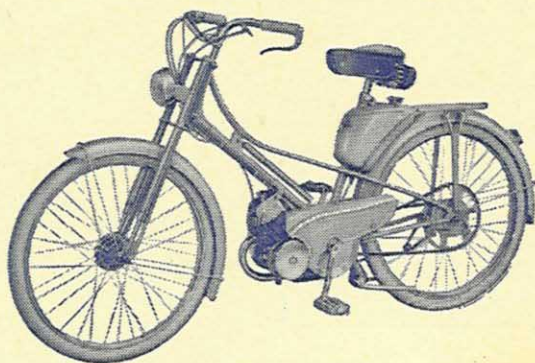
*Mobylette*



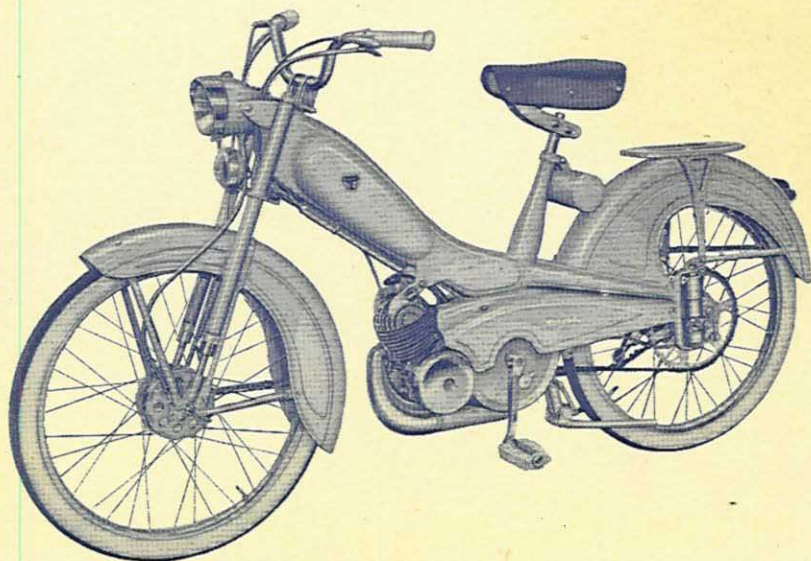
**OPERATING AND  
MAINTENANCE INSTRUCTIONS**



**Type A.V. 32**



**Type A.V. 54**



**A. V. 75**

# Mobylette

## FOREWORD

This booklet is issued to enable our customers to get the best service out of the Mobylette.

We advise therefore the owner of a Mobylette to read this booklet with the greatest attention and to follow up our instructions very closely.

The Mobylette is covered in France and abroad by the following patents :  
N<sup>os</sup> 996.360 Add. 59.977 - 992.040 - 1.059.321 - 998.216 - 1.046.015 - 1.074.947 -  
1.066.837 - 1.045.919 (Licence René MANCIN) - 1.051.549 - 1.087.907 - P. V. 671.254  
- P. V. 687.741.

## DESCRIPTION

The Mobylette is a bicycle with a built-in engine. It is designed to make a perfect unit which combines pleasant driving to sturdiness and to the lowest running cost. Comfort is obtained by special balloon tires and stability by a low, central location of the engine.

New manufacturing process allow silent running, appropriate cooling and, even at low speed, real power of the engine.

## DRIVING

a) The Mobylette is driven solely by means of a twist grip on the right hand side of the handlebar operated instinctively and easily by the driver even with thick gloves. When this twist grip is in neutral, the engine is stopped and the decompressor closed, thus producing the maximum braking effect of the engine. When turning the twist grip towards the right (clockwise) you open the decompressor, the braking is only slight but the engine does not run. When turning it towards the left (counter-clockwise) the throttle operates and gives the desired speed.

b) The Mobylette is equipped with two brakes. The front brake lever is on the right of the handlebar, the rear brake lever on the left. They are to be operated preferably when the twist grip is in neutral (as the best brake is the engine).

c) To help starting in cold weather, a thumb operated lever, on the left side of the handlebar, controls the choke. It should be pressed upon during a short while, only if necessary. When released, the lever will automatically swing back to its original position.

d) The Mobylette can, if necessary, be ridden as an ordinary bicycle. In this case, one has to declutch the back wheel from the engine. To do so,

manoeuvre the lock button intended for this purpose on the pulley wheel.

To clutch back again the rear wheel with the engine unit, locate this button on the opposite position.

e) Upon receiving the Mobylette, it is advisable to adjust the saddle and the handlebar. The saddle must be adjusted in height so as to allow the rider to put both feet flat on the ground without difficulty. The handlebar grips should allow a correct and comfortable position.

### **Installing the Nipples**

— Put in place the yellow nipple on the bracket axle,

— Put in place, only for the engine unit with automatic clutch, the white nipple on the cranshaft axle.

**Note :** Both nipples are packed inside the tool bag.

### **Lubrication**

Though a lubrication is originally being factory performed, it is advisable, prior to the use of the machine, to lubricate, by means of the nipples, the needles of the clutch and of the bracket pulley, the machine resting on its stand.

f) Fill the tank with a gasoline-oil mixture. We recommend 7% of CASTROL self-mixing SM 20 oil (or equivalent oil viscosity grade SAE 20). The tank cap is fitted with a measure for the oil. Use 4 measures per quart of gasoline, even after the running-in mileage.

Before starting, open the gas tap located on the tank (unscrew gently the knurled knob), turn the twist grip completely towards the right. Ride the machine and after pedalling a few yards, turn the twist-grip briskly towards the left. At this moment the engine starts. Remember that a few seconds are necessary for the fuel to reach the engine.

g) On the road, control the speed by turning the twist grip. To slow down, turn the twist grip back into neutral and apply the brakes if necessary. Remember that the best braking effect is obtained in the neutral position of the twist grip.

h) To stop completely, turn the twist grip completely towards the right, his will bring the engine to rest.

As said above, the engine is the best brake and allows to ride a long way downhill at a reasonable speed with the throttle shut. Both brakes can be applied for an immediate stop (with the twist grip in neutral). When riding down a very long hill, never close the gas tap, otherwise the lubrication of the engine would cease.

Do not forget to turn off the gas tap (screw up gently and completely the knurled knob) each time you intend to leave the Mobylette parked for a long time.

## **RUNNING-IN**

Fitted with hard chrome lined cylinders, our engines leave the factory with minimum clearances. The engine will not give its real power until 320 miles approximately. During this mileage, do not allow any straining or overheating, especially when going uphill.

**After running-in mileage,** except for Mobylettes 32 S and 32 M, replace the jet factory installed on the carburettor, by the spare jet in the tool bag.

## **SERVICING**

### **Cycle Unit**

Take the same care of the cycle as of a normal bicycle. Make sure that

the brakes are always well adjusted and that the various control work freely. Lubricate the articulations with CASTROL XL (or equivalent quality oil viscosity grade SAE 30/40). Also keep adjusted the control cable of decompressor which must be, when opened, 5/34" above its seat. The twist grip must be adjusted so that the throttle is entirely closed before the relief valve of the decompressor starts to open. Adjusters are to be found on each control cable.

### Telescopic front forks

For Mobyettes equipped with telescopic front forks, lubricate these latter every 600 miles with a grease gun and CASTROLEASE GRAPHITEE (use grease-nipples at the rear of each fork sheath).

### Clutch

Also lubricate the clutch (nipple in the center) every other 1200 miles in normal driving conditions, or every other 600 miles when driving with frequent starts and stops (large cities traffic).

Use grease CASTROLEASE C. L. for this latter operation (or threading grease).

### Rear suspension

For Mobyette models equipped with a rear spring suspension, lubricate this latter every 600 miles with grease CASTROLEASE GRAPHITEE.

### Hubs

Practically, no maintenance is required for the front and rear hubs. Both hubs must be filled up every 3000 miles with CASTROL SPHEEROL S grease (or equivalent grease high melting point).

### Chains

Never tighten the chains too much. Adjust the transmission chain by pulling back the rear wheel. Release the pedal chain during this operation by loosening the tension arm.

Be sure that the chains are always adequately lubricated. They must be taken down every 1200 miles or so, and cleaned up with Kerosene. Dip them afterwards in a bath of heated CASTROL D oil. Allow them to cool and wipe them before replacing.

### Pedal Unit

About every 1200 miles, grease the bearings through the pressure grease nipple on the left hand side of the axle, using only CASTROLEASE C. L. grease.

### Tires

For good riding comfort and so as not to get the tires worn out prematurely, it is most important to adhere to the following pressure instructions :

- | — Size            | Pressure  |
|-------------------|---|
| 600×50 B          |   |
| Hutchinson make : | Front : 1 Kg 600 (appr. 23 lbs/per s. i.)<br>Rear : 1 Kg 900 (appr. 27 lbs/per s. i.) |
| — Michelin make : | Front : 1 Kg 500 (appr. 21 lbs/per s. i.)<br>Rear : 1 Kg 800 (appr. 25 lbs/per s. i.) |
| (see note)        | Should a pneumatic inflator be used,<br>do not exceed 2 Kg 500 (35 lbs/per s. i.)     |
| — Size 23" × 2"   |   |
| Hutchinson make : | Front : 1 Kg 700 (appr. 24 lbs/per s. i.)<br>Rear : 2 Kg (appr. 28 lbs/per s. i.)     |
| Michelin make :   | Front : 1 Kg 600 (appr. 23 lbs/per s. i.)<br>Rear : 1 Kg 900 (appr. 27 lbs/per s. i.) |
| (see note)        |   |

**Note.** - Michelin tires are special in that they are fitted with "butyle" inner tubes (synthetic material whose main property is to "hold the air perfectly", which should not be compared with synthetic rubber used during the war

period shortages. Mending these inner tubes is somewhat special (see in this respect our instructions in the hereunder paragraph).

### **Punctures**

Repairs are made as for a bicycle. The front wheel can be taken off directly. The rear-wheel can be pushed forward after taking off the chains.

For models equipped with a rear suspension, the rear hub brake of which is of a spindle quickly-detachable type, take off the spindle, push the wheel forward so as to remove the chains, remove also the brake cable : the wheel comes off easily.

Mending the rubber inner tubes (Hutchinson) is made the usual way, whereas mending butyle tubes (Michelin) will require some more care. For cold mending, take the following cares :

— Scrape properly the punctured surface with a very fine abrasive cloth (emery cloth for instance). Do not use a rough scraper as usually enclosed in the repair outfit.

— Stick on the patch thereafter and leave it dry ; mind not to raise this patch to check whether it is well stuck.

— Then just reinstall the tube in its cover, the patch will get vulcanized in the long run.

Butyle tubes may also be warm mended by vulcanization process.

Remounting the repaired wheel is as easy as for an ordinary bicycle. Both chains set on, the chain tension and the wheel trueing will be realized by means of both tensioners. Thereafter, the wheel nuts are to be tightened up.

## **REPAIRS, ADJUSTMENTS**

### **Spark plug**

We advise our customers to use the same types as those fitted on our machines when leaving the factory.

In case of misfiring, remove spark plug to clean it and check the gap between points. This should be from 1/50 to 1/60 in. wide (4/10 to 5/10 mm).

Avoid removing plug when not necessary.

A dry and whitish looking plug means that there is too much choke, or, in other words, a lack of fuel; it is therefore necessary to fit a larger carburetor jet. On the other hand if the plug is black, it means that the mixture is too rich. Replace the jet fitted by a smaller one, provided the fouling of the plug is not caused only by the carbonization of the engine and exhaust.

### **Ignition**

A "NOVI" flywheel magneto provides engine ignition and lighting current. It has a stator fixed by two studs on the crank-case ; this bears the ignition coil, the lighting coil, the condenser and contact points. A felt pad for cam lubrication is attached to the armature-iron. This flywheel allows access to the contact points, irrespective of the position of the cam on the engine shaft.

In order to do this, loosen the central nut which is LEFT HAND THREADED, and remove the flywheel.

The cam, being in contact with the flywheel only through its engaging studs, remains on the shaft and therefore its original position on the engine is not altered. Once the flywheel has been removed, access to the contact points is easy.

The gap between the contact points is 1/64 in. (3/10 to 4/10 mm).

If for any reason, one wishes to remove the cam from the drive shaft,

use the special cam-extractor 26/100. **Never hammer the end of the shaft in order to remove the cam.**

The Mobylette is adjusted with 1/9 in. ignition advance (2,8 mm).

The flywheel needs no attention except the periodical checking of the gap between the contact points.

When checking this gap it is recommended to pour a few drops of special NOVI oil on the lubricating felt pad of the cam.

With the exception of the adjustment of the magneto contact points, repairs to the flywheel magneto should be carried out only by a competent mechanic.

### **Engine Unit**

The engine does not require any special attention except for regular lubrication and periodical decarbonization. The latter operation **MUST BE DONE** after a maximum mileage of 1800 miles, or more often if lubrication has been abundant. But, as said above, it is much more economical to lubricate adequately, even if one has to decarbonize more frequently, than to save oil and then have to pay for repairs.

The use of good quality oil results in lesser and more easily removable carbon deposits.

## **AUTOMATIC CLUTCH**

Certain models of our range of mobylettes are fitted with an automatic clutch whose action only depends on the speed of the machine and not on the engine speed. At the start, the Mobylette behaves like an ordinary bicycle, and in order to run the engine, one has to operate the twist grip as previously explained. When the speed reaches 3 miles per hour, the clutch engages automatically and the engine starts running. When the speed falls under 3 miles per hour (either by braking or slowing down) the clutch disengages automatically. One can then stop completely, by braking, or keep pedalling slowly, with an idling engine. When the machine reaches again the speed of 3 miles per hour, the automatic clutch operates again.

The speed at which the clutch engages is factory-adjusted at approximately 3 miles per hour. It depends on the radial clearance between the jaw linings and the drum, which is measured on the inside with block gauges and should be of 1/40" (0,6 mm) for the given speed of 3 miles per hour.

If one wishes to alter this engaging speed, remove the nipple, plug the threaded opening with a dummy screw, and pull off the drum with the special cam extractor 24/100, after the nut has been taken off (standard right-hand thread).

To increase the clutch engaging speed, the two jaw-nuts and lock-nuts must be tightened equally. If, on the contrary, these nuts are loosened, speed is reduced.

When re-assembling, always tighten the lock-nuts and do not forget to set back the drum pin.

N. B. — The presence of grease in the drum does not alter normal performance of a properly adjusted clutch.

### **Decarbonizing**

Remove the cylinder head, cylinder and exhaust pipe. Clean cylinder ports and the inside of exhaust pipe, using a brass or aluminium scraper. Scrape off the carbon deposit on the top of the piston and at the bottom of the cylinder head. Decarbonizing the engine alone is not sufficient, the exhaust pipe and the silencer must also be cleaned up.

However, decarbonizing the exhaust needs not be done so often, once

every 4500 miles or so is generally sufficient. When doing this, loosen the carbon deposit on the walls of the pipe and silencer by tapping gently with a wooden hammer, then sweep up the inside.

To remove the exhaust silencer, unscrew the inner nut with a pipewrench, the tail cover then comes out together with the baffles.

These operations will be absolutely necessary if the following defects are noticed :

- Lack of power from the engine
- Foul starting
- Backflooding in carburetor
- Foul plugs
- Engine impregnated with oil
- Overheating.

It is better to have all these operations performed by a qualified mechanic.

### **Carburetor and Filters**

If properly adjusted, this device shall always ensure proper combustion.

It is fitted with an intake silencer and a choke valve which allows correct starting under all temperature conditions.

Carburetor specifications :

a) " Service " and " Utility " models ; Gurtner type A 10 DSF, body n° 3761, jet 20 or 19 according to the fuel, throttle n° 8 " Mobylette special ", sprayer n° 3863-2, intake silencer n° 3855, float n° 3739.

b) " Luxe " and " Super Standard " models : Gurtner type AR 10 DSF, body n° 5478, jet 20 or 19 according to the fuel, throttle n° 8 type 3100, sprayer n° 3863-2, intake silencer n° 3855, float n° 5186.

Idling stop through left hand threaded vertical screw.

Screw up to increase the idling speed, and vice versa.

To clean the jet, take off the left hand chain guard and slacken the jet with a spanner (9 mm).

The Mobylette is equipped with two filters : a main filter between the fuel tank and the gas-tap, and a safety filter at the entrance of the carburetor. Check their cleanliness when fuel does not flow through.

### **Decantation filter**

Furthermore, our latest models are fitted with a decantation chamber, i.e. a main safety filter preventing any particle of dust to get to the jet, thanks to a cylindrical filter made of very fine wirelattice. Cleaning this filter is most easy :

a) Loosen gently the fastening nut n° 4166 at the top.

b) Then turn the decanting chamber by 45° maximum. IMPORTANT : Do not turn it over 45° to keep the water at the lower part of the chamber.

c) Then unscrew the plug holding the filter, at the bottom part of the chamber.

d) Throw away the few drops of water so recuperated.

e) Clean thoroughly the filter by dipping it simply in pure gasoline if only slightly dirty, or brush it softly if the wire-lattice is more dirty.

f) Rescrew then both nut and plug.

g) Replace the filter into the decantation chamber, and this latter one to its original position.

This operation avoids the user to dismantle the complete carburetor or the gasoline pipe.

IT IS ADVISABLE TO CLEAN UP THE FILTERS EVERY OTHER 1300 MILES (i.e. 2000 kms about).

## Primary Transmission

The V belt requires no maintenance for thousands of miles. Whenever necessary tighten it, but not too much, by loosening slightly the bolts securing the engine to the frame. Adjustment is allowed by swinging the unit around the upper bolt. Afterwards, screw the bolts tight again, and fasten with split pins.

## Lighting Equipment

Lighting current is provided by the flywheel magneto ; the switch is placed on the headlight.

Use threaded 6 V. 1 Amp. bulb for the headlight and 12 V. 0,5 Amp. threaded bulb for the tail light.

Keep the electric wires in good condition.

## Electric Bell

The electric bell is fed directly by the flywheel magneto. It should ring even at walking speed. The bell is operated by a button located on the handlebar.

The electric bell exists now only on our " De Luxe " models, but may be fitted on the other models as an extra, on request.

A screw located at the bottom part of the bell is intended for adjustment without dismantling. The clearance between the bell-cover and the hammer in both positions is 1/250 in. to 1/125 in. (0,1 to 0,2 mm). By rotating the bell-cover, place the hammer in the right position.

## ENGINE TROUBLES

Serious break-downs very seldom occur. Slight troubles may happen and it is better to know how to repair them on the spot.

The engine stops or misfires :

Two reasons : Ignition or carburation.

a) **Ignition** : See if plug is not fouled by oil. Clean with gasoline and scrap the points with sand paper. If the plug is in good condition and does not spark, check :

- The wire leading to the plug
- The flywheel magneto
- The contact points (clean them up)
- Check that the gap between them is not wider than 1/64 in.

(4/10 mm)

- Replace them if damaged
- Replace the condenser if damaged
- Check that there is no short circuit in the armature.

The three latter operations should be carried out by a specialist.

b) **Carburation** : The engine starts all right but stops abruptly. Check that the fuel flows to the carburetor, if not, unscrew the feed pipe, the tank and carburetor filters, and clean all these parts.

If the fuel does not flow from the float chamber to the carburetor, if the engine works weakly on level ground and stops as soon as the throttle is opened, it is because the jet is fouled. Clean it up by blowing through it hard and clean the carburetor, especially the filter inside the decantation chamber. A jet which has just been cleaned, may be fouled several times in succession if the fuel contains water or dirt.

If the carburetor is flooded, it is because some particle of dirt prevents the needle-valve from closing. Clean it. If the needle is worn out, fit a new one. Clean the filter under the tank.

If the engine coughs when running at low speed, or pulls weakly specially



uphill, or backfires, it means that the mixture is too poor, a larger jet must be fitted.

If the engine spits or backflows, it means an excess of choke, and a larger jet should be fitted.

On the contrary, if the engine works unevenly and jerks (4-stroking), it means that the fuel is too rich and a smaller jet should be fitted.

Obviously the petrol consumption varies according to the cruising speed and the hills encountered.

**As a rule, do not alter the carburetor adjustment, unless it is absolutely necessary as in cases of :**

- Extreme heat,
- Extreme cold.

Changes in the weather may influence the working of the carburetor without the adjustment of the carburetor being to blame.

Carburation is good only when engine is warm.

## **“ MOBYMATIC ”**

**Registered Mark**

Protected by French patents S.G.D.G. 1.045.919 (René Mangin Licence)  
1.051.549 — 1.074.947 — 1.087.907 — Certificate 671.254

The Mobymatic is fitted with an automatic speed change which ensures automatic shifting from one speed to another according to driving conditions.

The gear-shift is factory adjusted and ensures the best speed ratio corresponding to the best service conditions of the Mobymatic. This adjustment can be modified by changing the belt tension by means of the knurled knob on the lower part of the frame in front of the propstand bracket. By screwing this knob towards the front of the machine, the release spring is compressed and this operation increases the belt tension and raises the speeds at which gears are shifted. It is advisable not to change the factory adjustment immediately ; but, when this change is found to be necessary, the belt can be re-stretched by means of the knurled knob, as previously explained. The other knob, opposite this one, in front of the machine, limits the frontwards displacement of the engine and must be adjusted so that when the belt is removed the swivel device cannot overturn.

Lubricate clutch and gear shift (grease nipple in the center) every other 600 miles with CASTROLEASE GRAPHITEE. Also lubricate the engine swivel device and the engine articulation axle, every other 600 miles with the same grease.

On the Mobymatic, the lock button placed on the bracket pulley is replaced by a hexagonal nut which can be loosened with the spark-plug wrench. This hexagonal nut must be tightened, when engaging in “ engine-position ” until no looseness is felt ; however, it must not be overtightened.

Attention is drawn to the fact that on the Mobymatic “ De Luxe ”, and “ Super-Standard ” models, i.e. on models fitted with the automatic clutch, the Mobyette can be started when on its stand, the engine being then actuated by means of pedals and clutch. When the engine is running, rear brake must be operated so as to stop the wheel, thus automatically declutching the engine. This one then idles as it would on a car or a motorcycle. This starting method can be used at any time, but is particularly recommended when on a hill, so as to avoid the necessity of starting the engine when the speed of 3 miles per hour has been attained.



## OTHER MODELS OF OUR LINE



**Bicycles**



**Type S.B.S.**



**Type D 45 S**



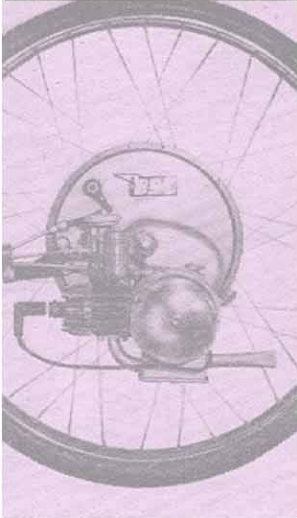
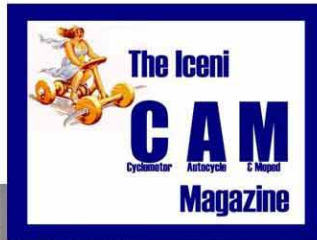
**Type Z 56**

**Mobylette**  
The motorized-bicycle

The biggest  
production in  
the world!

Near 2 million  
on the roads!

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